



# UNITED STATES PATENT AND TRADEMARK OFFICE

VS

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/715,367	11/19/2003	Tatsuhiko Kagchiro	HITA.0461	3774

38327 7590 01/17/2008  
REED SMITH LLP  
3110 FAIRVIEW PARK DRIVE, SUITE 1400  
FALLS CHURCH, VA 22042

EXAMINER

ALLISON, ANDRAE S

ART UNIT PAPER NUMBER

2624

MAIL DATE DELIVERY MODE

01/17/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/715,367

Applicant(s)

KAGEHIRO ET AL.

Examiner

Andrae S. Allison

Art Unit

2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on RCE filed October 31, 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-6,8,12 and 14-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6,8,12 and 14-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>See Continuation Sheet</u> | 6) <input type="checkbox"/> Other: _____  |

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :10/31/2007;  
12/17/2007; 12/07/2007..

## DETAILED ACTION

### *Response to Remarks*

1. The Office Action has been issued in response to RCE filed October 31, 2007.

Claims 1-6, 8, 12 and 14-20 are pending.

### Examiner Notes

In the previous Office Action, claims 1-6, 8, 12 and 14-20 were allowed. However, Applicant filled a RCE along with three IDSs and upon review of the document cited in the IDSs, a new ground of rejection is presented.

### IDS

The IDSs dated (10/31/2007, 12/07/2007, 12/17/2007) has been considered by the Examiner.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 12 and 14- 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over ProCashin (NPL document titled: "ProCashIn/Signature for § 36 BbankG") in Giesecke et al (NPL document titled: "PIDSY® Post Identification System").

As to independent claim 12, ProCashin discloses a method of tracing bank notes (method to remove counterfeit money from circulation by back tracing, page 2, [p][001-003]), comprising the steps of: receiving a deposit of an initial bank note (see page 3, section bill categories, where bank bill are deposited into an ATM); extracting one or more initial images from the initial bank note; attaching an initial transaction log to the one or more initial images (see page 14, section Notation, [p][002]; where signature data is created consisting of comparison signatures and corresponding transaction data); receiving one or more images of a bank note substantially the same as the initial bank note that has been identified as a counterfeit bank note (reference signatures, see page 14, section Notation, [p][003]); comparing the one or more initial images of the initial bank note to the one or more images of the counterfeit bank note in order to obtain a comparison result (see page 14-15, section- Handling the bill backtracing operation, where the comparison and references signatures are compared). ProCashin teaches retrieving the initial transaction log, however does not specifically mention retrieving the initial transaction log based on the comparison result, if the comparison result indicates that the one or more initial images of the initial bank note and the one or more images of the counterfeit bank note are within a range of similarity. Giesecke discloses a method for tracing counterfeit money that includes the step of retrieving the initial transaction log based on the comparison result, if the comparison result indicates

that the one or more initial images of the initial bank note and the one or more images of the counterfeit bank note are within a range of similarity (see page 2). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modified the method of ProCashin with the method for tracing counterfeit money of Giesecke to bring together the data of counterfeit with original data of a deposit if a counterfeit bill is detected so that the origin of the counterfeit can be traced.

As to claim 14, ProCashin teaches the method, wherein the step of extracting one or more initial images comprises: extract a front side initial image of the initial bank note in a first initial position; extract a front side initial image of the initial bank note in a second initial position; extract a back side initial image of the initial bank note in a first initial position; and extract a back side initial image of the initial bank note in a second initial position (see page 24, section Scanning in the counterfeit bill).

As to claim 15, ProCashin teaches the method, wherein the step of receiving one or more subsequent images comprises: receiving a deposit of a subsequent bank note; and extracting one or more subsequent images from the subsequent bank note (see page 24, section Scanning in the counterfeit bill).

As to claim 16, note the discussion of claim 14 above.

As to claim 17, ProCashin teaches the method, wherein the step of comparing comprises comparing each subsequent image in each subsequent position a plurality of times to a corresponding initial image (see page 14, section Handling the bill

backtracking operation).

As to claim 18, ProCashin teaches the method, wherein the one or more initial images include a unique characteristic that is specific to only one bank note, wherein the initial bank note is the only one bank note with the unique characteristic, wherein the unique characteristic includes other information besides a serial number of the initial bank note (signature data, page 14, section Notation, [p][0021]).

4. Claims 1-6, 8 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over ProCashin (NPL document titled: "ProCashIn/Signature for § 36 BbankG") in Giesecke et al (NPL document titled: "PIDSY® Post Identification System") further in view of Jones et al (Pub No.: US 2003/0059098)...

As to independent claim 1, this claim differs from claim 12 only in that claim 1 is apparatus whereas, claim 12 is method and the limitations an automatic teller machine (ATM) electronically connected to one or more devices, the one or more devices comprising: a deposit device, wherein an initial bank note being transferred to an image extraction device, an image extraction device; a transaction log device, a comparison device and a retrieval device are additively recited. Giesecke clearly discloses an ATM electronically connected to one or more devices, the one or more devices (see Fig on page 2), however neither ProCashin or Giesecke disclose a deposit device wherein an initial bank note being transferred to an image extraction device, an image extraction

device; a transaction log device, a comparison device and a retrieval device. Jones discloses an automatic teller machine (ATM) (see Fig 1) electronically connected to one or more devices, the one or more devices comprising (see [p][0049], lines 8-10, where Fig 1 is used as a stand alone device such as an ATM ): a deposit device (110, input receptacles; see Fig1) wherein an initial bank note being transferred to an image extraction device (see Fig 3a, step 210), an image extraction device (140, image scanner; see Fig 1); a transaction log device (160; memory; see Fig 1); a comparison device (140, controller, see Fig 1) and a retrieval device (140, controller, see Fig 1).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combined the teaching of ProCashin as modified by Giesecke with Jones to track currency bills by extracting identification characteristics so that each processed bill can be associated with the customer depositing the bills, (see [p][0010]).

As to claim 2, note the discussion above, Jones teaches the automatic teller machine the one or more devices further comprising at least one of: a storage device (180, memory, see Fig 1) configured to store the one or more initial images and the transaction log and a network link (see Fig 4a) to an external storage device configured to store the one or more initial images and the transaction log.

As to claim 3, ProCashin teaches the method wherein the comparison device is further configured to determine if the one or more initial images are within a range of



similarity to the one or more subsequent images (page 14, section Handling the bill back tracing operation, [p][001] ).

As to independent claim 4, all the limitations are discussed above except: extract a front side image of the counterfeit bank note in a first position; extract a front side image of the counterfeit bank note in a second position; extract a back side image of the counterfeit bank note in a first position; and extract a back side image of the counterfeit bank note in a second position. ProCashin teaches extract a front side image of the counterfeit bank note in a first position; extract a front side image of the counterfeit bank note in a second position; extract a back side image of the counterfeit bank note in a first position; and extract a back side image of the counterfeit bank note in a second position (see page 24, section Scanning in the counterfeit bill).

As to claim 5, note the discussion of claim 4 above.

Claim 6 differ from claim 17, only in that claim 17 is method claim whereas, claim 6 is apparatus claim. Thus, claim 6 is analyzed as previously discussed with respect to claim 17 above.

Claim 8 differ from claim 19, only in that claim 18 is method claim whereas, claim 8 is apparatus claim. Thus, claim 8 is analyzed as previously discussed with respect to claim 19 below.

As to claim 20, Jones teaches the method of wherein the steps of the method are stored on a computer-readable medium (memory, 160, see Fig 1) as one or more instructions (software, [p][0051], line 6) for tracing bank notes, wherein the one or more instructions, when executed by one or more processors (150, see Fig 1), cause the one or more processors to perform the steps of the method.

5. Claim 19 is are rejected under 35 U.S.C. 103(a) as being unpatentable over ProCashin (NPL document titled: "ProCashIn/Signature for § 36 BbankG") in Giesecke et al (NPL document titled: "PIDSY® Post Identification System") further in view of Onishi et al (Pub No.: US 2002/0136457).

As to claim 19, neither ProCashin or Giesecke disclose expressly the method wherein the step of comparing comprises: analyzing image characteristics using a Euclid distance formula; and determining that the one or more initial images and the one or more subsequent images have a Euclid distance near zero, wherein the range of similarity includes having a Euclid distance near zero.

Onishi disclose a method for establishing correspondones between an input image and a reference image ([p][0001], lines 1-3) that includes using a Euclid distance

formula (normalized correlation coefficient, [p][0045], line 1-9); and determining that the one or more initial images and the one or more subsequent images have a Euclid distance near zero, wherein the range of similarity includes having a Euclid distance near zero (see [p][0048], lines 1-8, where if the input image and the reference images are similar the normalized correlation coefficient becomes zero).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to have combined the teaching of Onishi with the teachings of ProCashin as modified by Giesecke to find similarities between a initial bill and a stored or subsequent bill in order to determine if the initial bill is counterfeit.

### ***Inquires***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrae S. Allison whose telephone number is (571) 270-1052. The examiner can normally be reached on Monday-Friday, 8:00 am - 5:00 pm, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Meta can be reached on (571) 272-7453. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Application/Control Number:  
10/715,367  
Art Unit: 2624

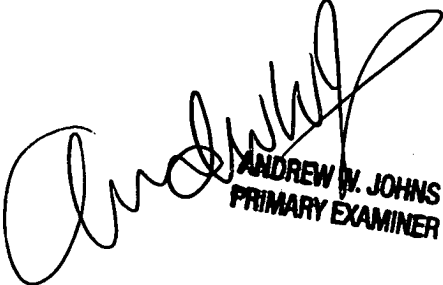
Page 10

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Andrae Allison

January 9, 2008

*A. A.*

  
ANDREW W. JOHNS  
PRIMARY EXAMINER